

CLAIMS

What is claimed is:

1. A system to support management operations associated with an interconnect device, the system comprising:
 - a configuration switch to receive an operator command to reset authentication data that facilitates authorization of the management operations from an operator, and to generate a reset signal in response to the operator command; and
 - a port of the interconnect device, coupled to the configuration switch, to maintain the authentication data and to reset the authentication data upon receiving the reset signal from the configuration switch.
2. The system of claim 1 wherein the port is to store the authenticated data together with a set of associated attributes.
3. The system of claim 2 wherein:
 - the port is a management port;
 - the authentication data is a management key; and
 - the set of associated attributes includes a protection attribute specifying a level of protection required for performing a particular management operation and an expiration attribute controlling expiration of the management key.

4. The system of claim 3 further comprising:

a sub-network (subnet) manager, coupled to the interconnect device, to store a copy of the management key and to include the management key into a Subnet Management Packet (SMP) sent to the management port for a comparison with the management key stored in the management port.

5. The system of claim 3 wherein the management port comprises:

an initialization module to store the authentication data;

a decoder to store a first copy of the authentication data;

a management agent to store a second copy of the authentication data; and

a processor subsystem interface to provide access to a storage device that stores a third copy of the authentication data.

6. The system of claim 5 wherein the decoder is to receive the reset signal from the configuration switch.

7. The system of claim 6 wherein the decoder is to communicate the reset signal to any one of the initialization module, the management agent and the configuration interface.

8. A method to support management operations associated with an interconnect device, the method comprising:

receiving a reset signal from a configuration switch at a decoder of a management port, the reset signal indicating that an operator requested a reset of authentication data that facilitates authorization of the management operations; and

resetting a copy of the authentication data that is stored in the decoder in response to the reset signal.

9. The method of claim 8 further comprising:

receiving a management packet from a sub-network (subnet) manager with an update value for the authentication data; and
setting the copy of the authentication data stored in the decoder to the update value.

10. The method of claim 8 further comprising:

the decoder communicating the reset signal to any one of an initialization module, a management agent and a processor subsystem interface; and
resetting a corresponding copy of the authentication data upon receiving the reset signal at any one of the initialization module, the management agent and the processor subsystem interface.

11. The method of claim 8 wherein the authentication data is a management key.

12. A method to support management operations associated with an interconnect device, the method comprising:

detecting that a reset of authentication data residing in a management port of the interconnect device is required;

informing an operator that the reset is required;

refraining from sending subnet management packets (SMPs) to the management port upon detecting that the reset is required;

receiving a message from the operator that indicates that the authentication data has been reset; and

subsequent to the receipt of the message, sending to the management port an update SMP with a request to set authentication data residing in each unit of the interconnect device to an update value.

13. The method of claim 12 wherein:

the SMPs are virtual lane 15 (VL 15) packets; and

the authentication data is a management key.

14. The method of claim 12 wherein:

each SMP sent to the management port includes authentication data that matches authentication data residing in a decoder of the management port unless the authentication data residing in the decoder is set to a predetermined value.

15. The method of claim 12 wherein the authentication data is stored in the management port with a set of associated attributes, the set of associated attributes including a protection attribute specifying a level of protection required for performing a particular management operation and an expiration attribute controlling expiration of the authentication data.

16. The method of claim 15 wherein detecting that the reset is required comprises:

 sending a SMP containing a copy of the authentication data maintained by the subnet manager to the management port; and
 receiving a trap indicating that the management port has invalidated the SMP due to a mismatch between the authentication data included the SMP and the authentication data maintained by the management port and further indicating that the expiration attribute is set to a value that prevents expiration of the authentication data.

17. The method of claim 15 wherein detecting that the reset is required comprises:

sending an initial SMP containing a copy of the authentication data maintained by the subnet manager to the management port;

determining that a response to the initial SMP has not been received from the management port for a predefined time period;

re-sending the initial SMP for a predetermined number of times without receiving a response; and

determining that the failure to receive the response may be caused by a mismatch between the authentication data included in the initial SMP and the authentication data maintained by the management port.

18. The method of claim 12 wherein the update value is the value of authentication data stored in a database of the subnet manager.

19. The method of claim 12 wherein:

the management port stores multiple copies of the authentication data; and

only one copy from the multiple copies has been reset in response to the operator command.

20. The method of claim 19 further comprising determining the update value for the update SMP.

21. The method of claim 20 wherein determining the update value comprises:

upon receiving the message indicating that the authentication data maintained by the management port has been reset, sending to the management port a read SMP requesting a current value of the authentication data maintained by the management port;

receiving the current value of the authentication data maintained by the management port from the management port;

designating the received value as the update value; and

updating authentication data in a database of the subnet manager with the received value.

22. An apparatus to support management operations associated with an interconnect device, the apparatus comprising:

means for detecting that a reset of authentication data residing in a management port of the interconnect device is required;

means for informing an operator that the reset is required;

means for refraining from sending subnet management packets (SMPs) to the management port upon detecting that the reset is required;

means for receiving a message from the operator that indicates that the authentication data has been reset; and

means for sending to the management port an update SMP with a request to set authentication data residing in each unit of the interconnect device to an update value.

23. A system comprising:

an interconnect device to maintain authentication data in a plurality of units, the authentication data facilitating management operations associated with the interconnect device;

a configuration switch, coupled to the interconnect device, to cause a reset of authentication data residing in a management port of the interconnect device; and

a sub-network (subnet) manager, coupled to the interconnect device, to detect that the reset of authentication data residing in the management port is required, to inform an operator that the reset is required, to receive a message from the operator that indicates that the authentication data has been reset, and to send to the management port an update data packet with a request to set the authentication data residing in each of the plurality of units of the interconnect device to an update value.

24. The system of claim 22 wherein:

the SMPs are virtual lane 15 (VL 15) packets; and

the authentication data is a management key.

25. The system of claim 22 wherein:

each SMP sent to the management port includes authentication data that matches authentication data residing in a decoder of the management port unless the authentication data residing in the decoder is set to a predetermined value.

26. The system of claim 22 wherein the authentication data is stored in the management port with a set of associated attributes, the set of attributes including a protection attribute specifying a level of protection required for performing a particular management operation and an expiration attribute controlling expiration of the authentication data.

27. The system of claim 26 wherein the subnet manager is to detect that the reset is required by sending a SMP containing a copy of the authentication data maintained by the subnet manager to the management port, and receiving a trap indicating that the management port has invalidated the SMP due to a mismatch between the authentication data included the SMP and the authentication data maintained by the management port and further indicating that the expiration attribute is set to a value that prevents expiration of the authentication data.

28. The system of claim 26 wherein the subnet manager is to detect that the reset is required by sending an initial SMP containing a copy of the authentication data maintained by the subnet manager to the management port, determining that a response to the initial SMP has not been received from the management port for a

predefined time period, re-sending the initial SMP for a predetermined number of times without receiving a response, and determining that the failure to receive the response may be caused by a mismatch between the authentication data included in the initial SMP and the authentication data maintained by the management port.

29. The system of claim 24 wherein the update value is the value of authentication data stored in a database of the subnet manager.

30. The system of claim 24 wherein:
the management port stores multiple copies of the authentication data; and
only one copy from the multiple copies has been reset in response to the operator command.

31. The system of claim 30 wherein the subnet manager is further to determine the update value for the update SMP.

32. The method of claim 20 wherein the subnet manager is further to determine the update value by sending to the management port a read SMP requesting a current value of the authentication data maintained by the management port upon receiving the message indicating that the authentication data maintained by the management port has been reset, receiving the current value of the authentication data maintained by the management port from the management port, designating

the received value as the update value, and updating authentication data in a database of the subnet manager with the received value.

33. A machine-readable medium storing a description of a circuit, said circuit comprising:

a decoder to receive a reset signal from a configuration switch, to reset a copy of the authentication data that is stored in the decoder in response to the reset signal, and to receive a management packet from a sub-network (subnet) manager with an update value for authentication data residing in a plurality of units of an interconnect device; and

a subnet management agent to receive the management packet from the decoder and to control the update of the authentication data residing in each of the plurality of units.

34. A computer readable medium comprising executable instructions which when executed on a processing system cause said processing system to perform a method comprising:

detecting that a reset of authentication data residing in a management port of the interconnect device is required;

informing an operator that the reset is required;

refraining from sending subnet management packets (SMPs) to the management port upon detecting that the reset is required;

receiving a message from the operator that indicates that the authentication data has been reset; and

subsequent to the receipt of the message, sending to the management port an update SMP with a request to set authentication data residing in each unit of the interconnect device to an update value.